## REMARKS

**Rejection Under 35 U.S.C. § 103(a) - Vook et al. in view of Balasuriya**

Claims 1-5, 7-9, 11-16, 19-30 are all the pending claims in the application. By this Amendment, new claims 19-30 are added.

Claims 1-18 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Vook et al. (U.S. Patent Number 5,583,866; hereinafter "Vook") in view of Balasuriya (U.S. Patent Number 6,411,815). Applicant traverse the rejections with the following.

An embodiment of the present invention relates to a wireless communication apparatus comprising a transceiving unit, a controller, and a memory. The transceiving unit receives and transmits data externally and maintains a link to at least one slave device and receives a requested priority from the at least one slave device, when the wireless communication apparatus is operated as a master. The controller determines a priority of the at least one slave device considering the requested priority, determines a frequency of communication according to the priority of the at least one slave device and controls the communication with the at least one slave device. The memory stores the frequency of communication of the at least one slave device.

Applicant respectfully submits that the combination of Vook and Balasuriya fails to teach or suggest all of the elements of amended claim 1. Vook relates to a method for delivering broadcast packets in a frequency hopping spread spectrum radio communication system such as a local area network (LAN). Vook's method for delivering data to more than one user device simultaneously includes the steps of providing an indicator associated with at least a portion of a

dwell indicating that the transmission of user data is directed towards more than one user device, and informing the user devices of the repetition rate at which the indicator is transmitted. The user device schedules periods of time during which it is enabled and disabled respectively, based upon the repetition rate of the indicator received such that the user device is enabled and receives the data directed towards more than one user device.

In particular, Vook fails to disclose a transceiving unit receiving a requested priority from at least one slave device, and memory which stores the frequency of communication of the at least one slave device, as recited in claim 1. The Examiner has already admitted that Vook does not disclose "receiving a requested priority from the at least one slave device (Office Action page 5). The priority of the devices in Vook is not determined by the access point 14 considering a requested priority of slave devices. Instead, as disclosed in the Examiner cited excerpts, the priority of the devices is determined by whether or not the device is currently transmitting. Vook also fails to teach or suggest the feature of determining a frequency of communication according to the priority of the at least one slave device, as recited in claim 1. Although the Examiner points to column 7, line 34 to column 8, line 30 and Figure 3 of Vook, the cited excerpt does not indicate that the frequency of communication is determined according to the priority of the slave device. Instead, Vook discloses that the device 12 will tune to the selected access point 14 at the channel frequency (Hz) upon which a beacon in question was received. Such a disclosure, like the remainder of the cited excerpt, fails to describe the priority being used to determine the frequency of communication. Instead, Vook merely indicates that there is more than one frequency from which to select.

Additionally, although column 15, line 66 to column 16, line 36 of Vook discloses that P-persistence values are assigned to devices and may vary depending upon device status, with currently transmitting devices being assigned a higher status (higher P-persistence value) which are more likely to gain access to an idle channel, Vook specifically teaches that this status defined by the P-persistence value only defines a **probability** of gaining access, and does not guarantee access. Therefore, Vook also fails to teach or suggest the determination of a frequency of communication according to the priority of the at least one slave device, because Vook's P-persistence values are not indicative of actual access and communication, but rather only a **probability** of access and communication, and no concrete frequency of communication is ever determined in Vook, but rather probably likelihoods.

The Examiner also has also alleged that Vook's column 9, lines 9-19 and Figure 3 discloses a memory for storing the frequency of communication of the at least one slave device (Office Action page 7). However, Vook's information received from the beacons (34, 36 and/or 60) stored in a set of registers does not teach or suggest the inclusion of the frequency of communication of at least one slave device, as claimed. Vook's stored information only includes dwell information such as length of dwell, type of dwell, number of dwells, time within current dwell, and dwell frequency (Hz). The dwell itself is the time during which a device is tuned to an individual frequency of the hopping set in a frequency hopping system (column 1, lines 50-52). Vook never mentions or suggests storing the frequency of communication of any of the user devices (12).

Furthermore, Balasuriya fails to remedy the deficiencies of Vook. Balasuriya relates to arbitrating service requests within a dispatch group of a communication system. Balasuriya provides a hierarchical system for arbitrating service requests in which secondary arbitrators, which have incomplete information and authority, evaluate service requests before forwarding them up the hierarchy to a primary arbitrator, which has complete information and arbitration authority. If a secondary arbitrator has sufficient information to deny a service request without forwarding the request, it will. Thus, the hierarchy of secondary arbitrators acts to filter service requests from the primary arbitrators.

However, there is also no teaching or suggestion in Balasuriya of "a memory for storing the frequency of communication of the at least one slave device," as claimed. Balasuriya's secondary arbitrator only discloses storing information related to a service request, such as a called party identifier, a calling party identifier, a priority level of the service request, a requested quality of service, and a status of the service request. Thus, neither Balasuriya nor Vook teach or suggest the storing of a frequency of communication.

At least by virtue of the aforementioned differences, the invention defined by claim 1 is patentable over Vook in view of Balasuriya. Claims 2-5 and 7 are dependent claims including all of the elements of independent claim 1, which, as established above, distinguishes over Vook in view of Balasuriya. Therefore, claims 2-5 and 7 are distinguished over Vook in view of Balasuriya for at least the aforementioned reasons as well as for their additionally recited features.

Regarding claim 8, the combination of Vook and Balasuriya fails to teach or suggest all of the elements of amended claim 8. In particular, Applicant submits that Vook fails to disclose that "the at least one slave device transmits the requested priority according to the amount of data to be transmitted to the master device," as recited in claim 8. The Examiner has alleged that Vook's column 12, line 36 to column 13, line 18 and Figure 5 disclose that the at least one slave device transmits the requested priority according to the amount of data to be transmitted to the master device (Office Action page 7). However, neither Vook nor Balasuriya teach or suggest this accordance with the amount of data to be transmitted, as claimed. The passage cited to by the Examiner for this teaching does not at all mention or suggest an amount of data to be transmitted. Vook merely illustrates the process by which the AP (14) transmits beacon (34) information during the long dwell (30) and transmits lost beacon (36) information during the short dwells (32), enabling the user devices (12) to synchronize to the hopping set of the AP (14) (column 13, lines 10-15). Vook only discloses the transmission of beacon (34) information and the counting of dwell times and numbers in setting up the hop sequence in Vook's frequency hopping system. Because Vook only discusses the hop sequence and dwell times but never mentions any **amounts** of data to be transmitted to a master device, and Vook also fails to teach or suggest the transmission of a requested priority as discussed above, there is no teaching or suggestion in Vook of "transmit[ting] the requested priority according to the amount of data to be transmitted to the master device," as recited in claim 8.

Balasuriya fails to remedy the deficiencies of Vook, as there is also no teaching or suggestion in Balasuriya of "transmit[ting] the requested priority according to the amount of data

to be transmitted to the master device," as claimed. Balasuriya's priority levels are not taught or suggested to be requested or transmitted according to an amount of data to be transmitted to a master device. At least by virtue of the aforementioned differences, the invention defined by claim 8 is patentable over Vook in view of Balasuriya. Claims 9 and 11-14 are dependent claims including all of the elements of independent claim 8, which, as established above, distinguishes over Vook in view of Balasuriya. Therefore, claims 9 and 11-14 are distinguished over Vook in view of Balasuriya for at least the aforementioned reasons as well as for their additionally recited features.

Regarding claim 15, the combination of Vook and Balasuriya fails to teach or suggest all of the elements of amended claim 15. In particular, Applicant submits that Vook fails to disclose "(c) communicating with the at least one slave device according to the priority, wherein the step (c) subtracts one time from the frequency of communication after each communication with the at least one slave device," as recited in claim 15. The Examiner has alleged that Vook's column 16, lines 37-64 and Figure 8 disclose that the controller subtracts one time from the frequency of communication after each communication between the controller and the at least one slave device (Office Action page 6). However, neither Vook nor Balasuriya teach or suggest a subtraction of one time from the frequency of communication after each communication with a slave device, as claimed. The passage cited to by the Examiner for this teaching does not at all mention or suggest a subtraction of one time from the frequency of communication. Vook merely illustrates time slots of a dwell, and in particular that a higher P-persistence value has a greater probability of accessing a channel during an O slot (218).

Balasuriya fails to remedy the deficiencies of Vook, as there is also no teaching or suggestion in Balasuriya of "subtract[ing] one time from the frequency of communication after each communication with the at least one slave device," as claimed. At least by virtue of the aforementioned differences, the invention defined by claim 15 is patentable over Vook in view of Balasuriya. Claim 16 is a dependent claim including all of the elements of independent claim 15, which, as established above, distinguishes over Vook in view of Balasuriya. Therefore, claim 16 is distinguished over Vook in view of Balasuriya for at least the aforementioned reasons as well as for its additionally recited features.

**Newly Added Claims**

In addition to the above, Applicant adds new claims 19-30 to more fully claim the present invention as described in the specification. The new claims 19-30 are patentable for at least the reasons submitted for their respective base claims.

In addition, the cited reference does not teach or suggest: that "levels of the priority include high, medium, and low levels," as recited by claim 19; "the memory stores a high priority maximum number which is a maximum number of slave devices of a high priority, and a medium priority maximum number which is a maximum number of slave devices of a medium priority," as recited by claim 20; "the memory stores priorities of the slave devices that are currently linked," as recited by claim 21; that "levels of the priority include high, medium, and low levels," as recited by claim 22; "the memory stores the a total number of slave devices that are currently linked," as recited by claim 23; "the memory stores a polling frequency of each slave device that is currently linked," as recited by claim 24; that "slave devices that have a

polling frequency greater than zero are sequentially polled according to their priorities," as recited by claim 25; that "one time is subtracted from the polling frequencies of each slave after the respective slave has been polled," as recited by claim 26; that "any slave device having a non-zero polling frequency is repeatedly polled," as recited by claim 27; that "one is subtracted from the total number of slave devices stored in the memory when a slave device has a zero polling frequency," as recited by claim 28; "the memory is updated to have an initial value of both the total number of slave devices and the polling frequency of each slave device when the total number of slave devices becomes zero," as recited by claim 29; and "the controller updates a total number of slave devices stored in the memory whenever a slave device becomes linked or unlinked," as recited by claim 30.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

Reg No. 38,557

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Lenny R. Jiang
Registration No. 52,432

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